

## **Leveraging Prevention Through Design Principles (PtD) in Electrical Installations**

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**Abstract** - Modern awareness of workplace hazards has created a range of safety standards and best practices now accepted and implemented in the design and construction of many types of industrial and commercial installations. Prevention through Design (PtD) concepts are well understood and commonly applied in the design of many facilities where dangerous chemicals or dangerous concentrations of energy are a required part of the process. Heightened awareness of electrical hazards over the last two decades has resulted in greater understanding of the arc flash hazard and shock hazard as well as in many methods and tools to control the associated risks. However, the PtD concepts well understood and implemented in other aspects of industrial facility design may not be well understood or are often not implemented at the design and construction stage of the electrical infrastructure within industrial or large commercial facilities. This paper will discuss the correlation between PtD and industrial accidents and how prevention through design concept applied to electrical infrastructure can be used to improve safety and productivity in modern facilities.